|  |
| --- |
| **FHP2AB04 communication protocol** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| serial number | describe | The host computer sends data (13 bytes) (hexadecimal) | | | | | | | | | | | | |
|  |  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | Returns the current optical power | AA | 01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | Returns the current optical power | AA | 01 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | Returns the current optical power measurement result, reference power | AA | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | Switch the wavelength gear and read the reference power from ROM | AA | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | Switch the wavelength gear, switch directly to Rx\_Buf[4], and read the reference power from rom | AA | 2 | 1 | 1 | <7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | Switch optical power unit (uW, dbm, db) | AA | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | Directly switch the optical power unit to usart\_RxBuf[4],uW,dbm,db | AA | 2 | 2 | 1 | <3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | Switch to view reference value mode | AA | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | Set the current optical power as the reference value | AA | 2 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | Switch LED backlight | AA | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | Turn on LED backlight | AA | 2 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | Turn off LED backlight | AA | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| serial number | describe | The host computer sends data (13 bytes) (hexadecimal) | | | | | | | | | | | | |
|  |  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 20 | Auto power off | AA | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| twenty one | Automatic shutdown on | AA | 3 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| twenty two | Reset optical power reference value | AA | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| twenty three | Delete all records of eeprom | AA | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| twenty four | Read the value of the corresponding address of eeprom | AA | 20 | address | address | Number of bytes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | Returns the number of stored power records | AA | twenty two | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | Clear stored power records | AA | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| serial number | describe | **The instrument returns data (13 bytes) (hexadecimal)** | | | | | | | | | | | | |
|  | The blank spaces are all uncertain values. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | Returns the current optical power measurement result | AA | 1 | 0 |  |  | Optical power\*ptr | Optical power\*ptr+1 | Optical power\*ptr+2 | Optical power\*ptr+3 | ADC value\*ptr | ADC value\*ptr+1 | optical signal frequency | Power value adjustment gear |
| 2 | Returns the current optical power measurement result | AA | 1 | 80 |  |  | Optical power\*ptr | Optical power\*ptr+1 | Optical power\*ptr+2 | Optical power\*ptr+3 | Mode 0,1,2,4(uW,dbm,db,REF) | wavelength | Battery level (0, 1, 2, 3) |  |
| 3 | Returns the current optical power measurement result, reference power | AA | 1 | 1 |  |  | Optical power\*ptr | Optical power\*ptr+1 | Optical power\*ptr+2 | Optical power\*ptr+3 | Reference power\*ptr | Reference power\*ptr+1 | Reference power\*ptr+2 | Reference power\*ptr+3 |
| 4 | Switch the wavelength gear and read the reference power from ROM | AA | 2 |  |  |  |  |  |  |  |  |  |  |  |
| 5 | Switch the wavelength gear, switch directly to Rx\_Buf[4], and read the reference power from rom | AA | 2 |  |  |  |  |  |  |  |  |  |  |  |
| 6 | Switch optical power unit | AA | 2 |  |  |  |  |  |  |  |  |  |  |  |
| 7 | Directly switch the optical power unit to usart\_RxBuf[4],uW,dbm,db | AA | 2 |  |  |  |  |  |  |  |  |  |  |  |
| 8 | Switch to view reference value mode | AA | 2 |  |  |  |  |  |  |  |  |  |  |  |
| 9 | Set the current optical power as the reference value | AA | 2 |  |  |  |  |  |  |  |  |  |  |  |
| 10 | Switch LED backlight | AA | 2 |  |  |  |  |  |  |  |  |  |  |  |
| 11 | Turn on LED backlight | AA | 2 |  |  |  |  |  |  |  |  |  |  |  |
| 12 | Turn off LED backlight | AA | 2 |  |  |  |  |  |  |  |  |  |  |  |
| serial number | describe | **The instrument returns data (13 bytes) (hexadecimal)** | | | | | | | | | | | | |
|  | The blank spaces are all uncertain values. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 20 | Auto power off | AA | 3 |  |  |  |  |  |  |  |  |  |  |  |
| twenty one | Automatic shutdown on | AA | 3 |  |  |  |  |  |  |  |  |  |  |  |
| twenty two | Reset optical power reference value | AA | 5 |  |  |  |  |  |  |  |  |  |  |  |
| twenty three | Delete all records of eeprom | AA | 10 |  |  |  |  |  |  |  |  |  |  |  |
| twenty four | Read the value of the corresponding address of eeprom | AA | 20 | function return value |  |  | value read |  |  |  |  |  |  |  |
| 26 | Returns the number of stored power records | AA | twenty two |  |  |  | Number of records <=255 | Number of records, a multiple of 255 |  |  |  |  |  |  |
| 27 | Clear stored power records | AA | 19 |  |  |  |  |  |  |  |  |  |  |  |